

OSA -0975-64

11 February 1964

Dear Jack,

As you requested, we have investigated installing a tracking camera in the Q-bay.

The most feasible place to mount a 70mm recording camera in the Q-bay is on the lower hatch in the area presently occupied by the helium make-up bottle. This would require repositioning and reshaping the bottle which is also feasible. The space available would be 12" wide by 12" long and 9" high.

The suggested camera is the Maurer 222 with a 76mm f/2.8 lens, 2-1/4" x 2-1/4" format and a 100 feet film capacity. Its body size, including magazine, is 11-13/16" x 5-3/4" x 5-1/32". Its shutter speeds are 1/500, 1/1000, 1/2000, and 1/4000 sec. and is automatically controlled through an intervalometer.

It should be noted that a small window would have to be mounted in the hatch also.

Please do not hesitate to call on us if you have any additional questions.

Best regards

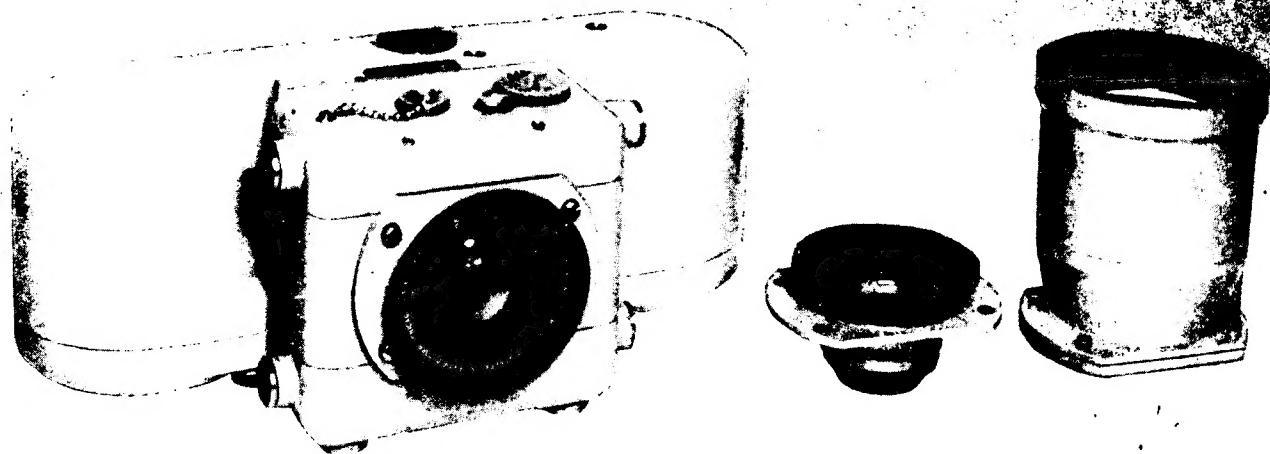
25X1A

[REDACTED]  
Dick

RCB:mb  
Enclosure

# the 222 camera

*highest shutter speeds*



The Model 222 Camera was developed to meet requirements calling for an increased shutter speed to 1/4,000 second and a more advanced exposure control system than that designed for the Model 220 Camera. Interchangeable lenses of 1½", 3" and 6" focal lengths were required, and because of the automatic exposure control system, special iris diaphragms with identical characteristics of linearity, and the same angular rotation stop-to-stop were required to provide maximum accuracy with all focal lengths, without the need for any adjustment of the computer.

A magazine of 100-ft. capacity in a wrap-around design was engineered for the Model 222 in order to fit this camera into certain aircraft wherein the front to back dimen-

sion of the camera and magazine combination could not be accommodated in the space provided. A reduction of approximately four inches from lens to magazine back was achieved. This magazine is designed so that it also fits the Model 220 and Type P-2 Cameras.

The Model 222 Camera has been ordered in production quantities for installation in a pod designed for use with the F-84 aircraft supplied to NATO Forces in Europe.

Custom modifications available include a vacuum back magazine, and a magazine with a reciprocating back pressure plate and glass platen for use at altitudes where a vacuum cannot be employed.

**J. A. MAURER, INC.**

**AERIAL CAMERAS**

37-01 31st STREET, LONG ISLAND CITY 1, N.Y.

222

Specification

**Installation** — Fixed, location varies with aircraft.**Length, Without Magazine** — 8 in. with 6 in. lens<sup>\*</sup>; 4 $\frac{1}{2}$  in. with 76mm lens<sup>\*\*</sup>; 4 $\frac{3}{8}$  in. with 38mm lens<sup>\*\*\*</sup>.**Width** — 5 $\frac{1}{4}$  in. (11 $\frac{1}{8}$  in. with 100 ft. wrap around magazine).**Height** — 5 $\frac{1}{2}$  in.**Weight, Without Magazine** —

|               |                 |
|---------------|-----------------|
| 7 lbs. 6 oz.  | with 38mm lens  |
| 7 lbs. 1 oz.  | with 76mm lens  |
| 8 lbs. 13 oz. | with 6 in. lens |

**Acceleration Range of Aircraft With Camera Installed** —

Operational: 8 G's in any direction.

Non-Operational: 12 G's in any direction.

**Operating Temperature Range** — -54°C to + 71°C (-65°F to + 160°F)**Power Supply** . . . 28 V d.c.**Power Dissipation** — 200 Watts (max.)**Control** — Automatic through intervalometer.**Lenses** —**38mm f/4.5 Biogon**

|               |   |
|---------------|---|
| **Resolution: | .42 line per mm AWAR (Area Weighted Average Resolution) |
|               | 55 lines per mm on axis                                 |
|               | 18 lines per mm in corners                              |

**Field Coverage:** . . . . . 70° on sides  
90° across corners**\*\*\*Coverage Factor:** . . . . . 1500 ft. square at 1000 ft. altitude**76mm f/2.8 Finitar****Resolution:** . . . . . 39 lines per mm AWAR  
45 lines per mm on axis  
25 lines per mm in corners**Field Coverage:** . . . . . 41° on sides  
56° across corners**Coverage Factor:** . . . . . 750 ft. square at 100 ft. altitude**6 in. f/2.8 Finitar****Resolution:** . . . . . 34 lines per mm AWAR  
44 lines per mm on axis  
24 lines per mm in corners**Field Coverage:** . . . . . 21° on sides  
30° across corners**Coverage Factor:** . . . . . 375 ft. square at 1000 ft. altitude**Altitude For A Scale 1:5000** — 1 $\frac{1}{2}$  in. lens: 625 ft.; 3 in. lens: 1250 ft.; 6 in. lens: 2500 ft.**Shutter Type** — Focal plane (detachable), manually set.**Shutter Speed** — 1/500, 1/1000, 1/2000, and 1/4000 sec.**Magazine Type** — Detachable, 15, 50, and 100 ft. capacity.**Film Type** — 70mm perforated roll film, (MS33525).**Negative Size** — 2 $\frac{1}{4}$  x 2 $\frac{1}{4}$  in.**Cycling Rate** — Pulse: up to 5.5 cycles per sec.; Runaway: 6  $\pm$  .4 cycles per sec.**Film Advance** — 14 perforations (2.618 in.) per frame.**Special Features** — Operation indication output pulse Film marking lamp.**Exposure Control** — Automatic, Range 165 to 5280 ft. Lamberts.**Light Range** — 165 to 5280 Foot Lamberts.**Components** — Camera Body, 38mm, 76mm and 6 in. lenses, Computer Box, Sensor, Magazines as ordered. Will operate with 15, 50 and 100 ft. magazines.**Installation Drawing** — 221-02-000.**Federal Stock Number** — 6720-534-0621.**Status** — In production.<sup>\*</sup>Does not include magazines. For 50 ft. magazines add 5-13/16 inch, for 100 ft. wrap around magazine 2-1/32 inch.<sup>\*\*</sup>Using Super XX film developed in D-19 to a gamma of 1.30  $\pm$  .15.<sup>\*\*\*</sup>To determine coverage at higher altitudes divide altitude by 1000 and multiply by coverage factor.

† Upon request and to suit your needs we can improve the above resolution.

